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REMARKS

The Examiner has indicated the present reissue application is in condition for allowance, except for two formal matters. The Examiner has requested that Applicant amend the specification of the present application to include modifications made to the original issued patent in a Certificate of Correction. The Examiner has also requested that Applicant submit a new affidavit, based on its previous affidavit, declaring that Applicant has conducted a search of its files to verify that it no longer possesses the Original Grant of the issued patent, US 5,388,260.

Amendment to the Specification

Applicant has modified the specification to include revisions previously made to the original patent in a Certificate of Correction granted on June 6, 1995. Applicant thanks the Examiner for pointing out that such revisions were still needed in the present reissue application. Applicant has rewritten the paragraphs affected by the revisions, and has also attached a marked-up version of the changes made to the specification by the current amendment. The attached page is captioned "Version with markings to show changes made."

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Affidavit Concerning Original Grant

Applicant has submitted a new affidavit, based on a previously submitted affidavit, declaring that it no longer possesses the Original Grant to US 5,388,260, since it believes it previously submitted the original grant in April, 1999. Applicant further declares that it has conducted an exhaustive search of the files within its office, including the file folder containing the present reissue application and the original patent, and has not located the Original Grant. Applicant concludes in its affidavit that it no longer possesses, and has surrendered, the Original Grant to US 5,388,260.

Applicant respectfully requests that the Examiner review Applicant's remarks in its response dated May 17, 2000, where Applicant summarizes its evidence that it surrendered the original patent. Applicant has again included copies of such evidence to support its assertion that it no longer possesses the Original Grant to US 5,388,260.

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Applicant encourages the Examiner to contact the undersigned at the phone number listed below, if the Examiner feels that a telephone interview, or conversation, would assist in the final resolution of the present matter, and the allowance and issuance of the present reissue application. Applicant again thanks the Examiner for his past assistance in the prosecution of the present reissue application.

Respectfully Submitted,
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VERSION WITH MARKINGS TO SHOW CHANGES MADE

Paragraph beginning at column 2, line 31 has been amended as
follows:

Automated storage libraries include a plurality of storage
cells or slots for retaining data storage media, such as magnetic
tapes, magnetic disks, or optical disks, a robotic picker
mechanism, and one or more internal peripheral storage devices.
Each data storage medium may be contained in a cassette or
cartridge housing for easier handling by the picker. The picker
operates on command to transfer the data storage media between
the storage cells and the internal peripheral storage devices
without manual assistance. An internal peripheral storage device
having a storage medium mounted therein is referred to as
"occupied". Once a data storage medium is mounted in an internal
peripheral storage device, data may be written to or read out
from that medium for as long as the system so requires. Data is
stored on a medium in the form of one or more files, each file
being a logical data set. A file is considered "open" when it is
reserved for access by a particular user and the storage medium
upon which it resides is mounted in a peripheral storage device
and ready to be accessed. For example, in an optical disk
library, a file is open if it is reserved for exclusive access
and the disk on which it resides is mounted in a drive and
spinning. A peripheral storage device having a storage medium
therein with an [omen] open file is referred to as "active",
regardless of whether actual electronic transfer is occurring. A

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peripheral storage device is also active if the storage medium
mounted therein is undergoing access under any standard operating
system command not requiring that a file be open, such as a
directory read. An active storage medium is generally considered
to be one in an active peripheral storage device. The internal
peripheral storage devices and storage cells may be considered
distinct levels of the storage hierarchy. In addition, data
storage media in shelf storage (i.e. not in the storage cells,
but instead outside the reach of the robotic picker without
manual intervention) may be considered yet another level of a
data storage hierarchy.

Paragraph beginning at column 8, line 27 has been amended as
follows:

     A generic library file server (GLFS) 50 controls the library
with a set of generic, intermediate hardware commands through a
formally defined interface which will be described later herein.
Data is manipulated by GLFS 50 at the logical record level
allowing for data access in quantities spanning from a single
byte to complete, variable length data objects. An operating
system 51 mediates the flow of control and directs incoming
operating system [co,hands] <u>commands</u> from the external interfaces
into the library subsystem. Operating system 51 can be any of
several known operating systems and in the preferred embodiment
is the OS/2 operating system. The use of the OS/2 operating
system generally allows for control of library 1 through standard
fixed disk operating system commands. Library control is

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directed through a unique command, DosFsCtl. This command is
used to support initialization, entry/exit of an optical disk
from library 1, read/store the library map file, mount/demount an
optical disk in drive 10, enable/disable virtual drive option,
etc. Drive control is directed through a unique command,
DosDevIOCtl. The remainder of the programmed control for library
1 is retained in microcode which is uploaded into the main memory
of the system controller 17 from a storage medium resident
therein at initialization. In alternative embodiments, some
function required to support the microprogrammed control may also
be provided as a utility to the operating system running in the
system processor 30.

Paragraph beginning at column 9, line 29 has been amended as
follows:

     The upper interface translator 80 is responsible for
translating between upper interface commands and those of GLFS
50. The lower interface translator 90 is responsible for
translating between the commands issued by the GLFS 50 and those
of the lower interface. Translators 80 and 90 are each
implemented as distinct linkable modules with clearly defined
interfaces, thereby permitting easy attachment of library 1 to
new upper and lower interfaces. The only [G] impact of
attachment to a new interface is the creation of a new portion of
translators 80 and 90 - the generic nature of GLFS 50 allows it
to remain unchanged.

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Please replace the paragraph beginning at column 22, line 3 with
the following rewritten paragraph:

Referring to FIG. 19, the periodic review of the activities
of drives 4 to determine if the optical disk in any of the
occupied drives 4 is sufficiently idle as to be preemptively
demounted begins with the periodic interruption of console 11 at
step 600. In the preferred embodiment, console 11 is interrupted
every 10 seconds. The interrupts are issued without regard to
the status of library 1 with respect to FIGS. 8-15. At step 601,
branching occurs according to the activity status of drives 4 as
in step 362, except that the preemptive demount eligibility time
X is replaced with a relatively much larger idle demount time Y.
If no drive 4 has been inactive for time Y, the flow returns at
step 605. Note that because the time Y is much greater than the
time X, the determination not to preemptively demount at step 601
has little, if anything, to do with the risk of churn.

Paragraph beginning at column 22, line 19 has been amended as
follows:

If at step 601 any drive has been inactive for time Y, the
DEMOUNT routine is called at step 602 to preemptively demount all
optical disks mounted in any such inactive drive 4 before
proceeding to step 605. The existence of a drive 4 that has been
inactive for time Y is considered to be an indication that
library 1 is relatively idle. Idle periods may occur during
periods of low overall system use, such as nights and weekends in
some data processing systems. At such times, it is not desirable

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to continue to spin the optical disks in drives 4. So long as
disks are spinning, the lasers in drives 4 will continue to
follow the tracks on the disks, resulting in needless servo
action. The drive motors and lasers will work to maintain drives
4 in a state of readiness even though no useful work is being
performed, thereby prematurely aging the drives 4. Note that
preemptive demounting here applies to all optical disks mounted
in such inactive drives, not just the least recently used disk,
as the need to reduce aging of the drives is considered to
outweigh the need to maintain disks on-line when library 1 is
relatively idle. Thus, by preemptively demounting certain disks
during relatively idle periods, the reliability of library 1 is
improved. In an alternative embodiment, the reliability of
library 1 could be improved by spinning down such disk without
their being demounted and returned to their home storage cell 3.

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